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| 09/836,287 | 04/18/2001 | Naoto Kinjo | Q63867 | 5456 |

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EXAMINER

KUMAR, SRILAKSHMI K

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| ART UNIT | PAPER NUMBER |
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2675

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/836,287

Applicant(s)

KINJO, NAOTO

Examiner

Srilakshmi K. Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The following office action is in response to Amendment B, filed July 22, 2004. Claims pending are 1-31, of which, Claims 7 and 8 have been amended, and Claims 22-31 are newly added.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho (US 6,064,384) in view of Howard et al (US 6,222,513)

As to independent claim 1, Ho discloses an image display apparatus, comprising; an image data acquiring section for acquiring image data (col. 4, lines 23-64); an image display section having a plurality of substantially sheet line image display mediums bundled (Figs. 3, 5-7 and 11c) and integrated for displaying images by using said image data obtained by said image data acquiring section (col. 9, lines 47-56); an image display mode setting device for setting an image display mode in displaying an image on an image display screen of each of the plurality of image display mediums of said image display section. Ho discloses two different ways to display images, (col. 4, lines 23-64 and col. 24, line 62-col.25, line 17, and col. 26, line 1-50). It would have been obvious to one of ordinary skill in the art that two different ways to display images would have been two different modes of display. Ho discloses an image display

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adjusting section for adjusting a display image according to the image display mode set by said image display mode setting device (col. 26, lines 1-50).

Ho does not disclose where the image display section having a plurality of substantially sheet like image display mediums bundled. Howard et al disclose electronic sheet display, which can be used with liquid crystal technologies (col. 1, lines 6-10. Further, Howard et al disclose where the electric, gyricon sheet has many characteristics such as being thin and flexible, and where multiple electronic paper sheets can be addressed by a single set of external driving electronics. Although, Howard et al do not explicitly state that the sheets may be bundled, it would have been obvious to one of ordinary skill in the art that the electronic sheet display of Howard et al can be bundled as stated in col. 1, lines 27-30. It would have been obvious to one of ordinary skill in the art to incorporate the electric sheets of Howard et al into that of Ho as Howard et al disclose in col. 1, lines 6-10 where the electric sheet display may be used with liquid crystal technologies.

As to independent claim 10, limitations of claim 1, and further comprising, wherein an image display method, comprising steps of; bundling and integrating a plurality of substantially sheet like image display mediums for displaying images by using image data; and setting an image display mode indicative of a display mode of an image on each of said image display mediums (Figs. 3, 5-7, and 11c, col. 4, lines 23-64 and col. 24, line 62-col. 25, line 17).

As to dependent claims 2 and 11, limitations of claims 1 and 10, and further comprising, wherein said image display mode setting device sets said image display mode by conducting at least one of; a designation of the image display screen for image display of one image display medium from the plurality of said image display mediums (col. 4, lines 23-64 and col. 24, line

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62-col.25, line 17, and col. 26, line 1-50), a designation of an image display position on the designated image display screen, a designation of a size of the display image, a designation of a direction of arranging the display image, a designation of a process of inverting the display image, a designation of a configuration of an outer frame of the display image, a designation of displaying a template image (col. 4, lines 23-64 and col. 24, line 62-col.25, line 17, and col. 26, line 1-50), a designation of composting the template image with the display image, and a designation of inputting a written comment. Ho discloses two different ways to display images, (col. 4, lines 23-64 and col. 24, line 62-col.25, line 17, and col. 26, line 1-50). It would have been obvious to one of ordinary skill in the art that two different ways to display images would have been two different modes of display.

As to dependent claims 3 and 12, limitations of claims 1 and 10, and further comprising, wherein said image display mode setting device includes a transparent input element provided on the respective image display screen of at least one image display medium of the plurality of image display mediums, and said image display mode setting device sets said image display mode under employment of the transparent input element (col. 25, lines 1-50 and col. 26, lines 1-50).

As to dependent claim 4, limitations of claim 1, and further comprising, wherein said image display adjusting section arranges and adjusts a plurality of images onto the plurality of said image display mediums according to page category information assigned to the plurality of said image display mediums (col. 25, lines 1-50 and col. 26, lines 1-50)

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As to dependent claim 5, limitations of claim 1, and further comprising, a data communication device that communicates with an external device or via a communication network so as to transmit said image data (col. 25, lines 1-50).

As to dependent claim 6, limitations of claim 1, and further comprising, wherein said image display adjusting section adjusts a display output of the display image according to a location environment (col. 25, lines 1-50 and col. 26, lines 1-50)

As to dependent claim 7, limitations of claim 1, and further comprising, a memory for storing said image data or voice data annexed to said image display screen (col. 4, lines 23-64 and col. 5); and an image input unit for inputting said image data or said voice data annexed to said image display screen, or a voice output unit for reproducing and outputting the voice data when having in said memory said image data or said voice annexed to said image display screen (col. 4, lines 23-64 and col. 5).

As to dependent claim 8, limitations of claim 1, and further comprising, a lens sheet provided on said image display screen of said image display medium (col. 4, lines 23-64).

As to dependent claim 9, limitations of claim 8, and further comprising, wherein said lens sheet is a lenticular lens sheet or a compound eye lens sheet (col. 4, lines 23-64 and col. 5).

As to dependent claim 13, limitations of claim 1, and further comprising, wherein the plurality of image display mediums displays comprise at least a first image display medium and a second image display medium (col. 4, lines 23-64 and col. 5), wherein an image display screen of said first image display medium displays a first image, and wherein an image display screen of said second image display medium displays a second image (col. 4, lines 23-64 and col. 5),

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and wherein said first image as displayed by said first display medium and said second image as displayed by said second image display medium are different (col. 4, lines 23-64 and col. 5).

As to dependent claim 14, limitations of claim 1, and further comprising, wherein only one surface side of each image display medium of the plurality of image display mediums has an image display screen for displaying an image (col. 4, lines 23-64 and col. 5).

As to dependent claim 15, limitations of claim 1, and further comprising, wherein two surface sides of each image display medium of the plurality of image display mediums displays has an image display screen for displaying an image (col. 4, lines 23-64 and col. 5), wherein a first surface side of said two surface sides has a first image display screen for displaying a first image, and wherein a second surface side of said two surface sides has a second image display screen for displaying a second image (col. 4, lines 23-64 and col. 5).

As to dependent claim 16, limitations of claim 15, and further comprising, wherein said first image display screen displays said first image, and said second image display screen displays said second image, and wherein said first image as displayed on said first image display screen and said second image as displayed on said second image display screen are different (col. 4, lines 23-64 and col. 5).

As to dependent claim 17, limitations of claim 1, and further comprising, wherein image data acquired by said image data acquiring section corresponding an image is written to an image display medium of the plurality of image display mediums, an image display screen of said image display medium displays said image (col. 25, lines 1-50 and col. 26, lines 1-50).

As to dependent claim 18, limitations of claim 1, and further comprising, wherein the image for which said image display mode setting device sets the image display mode in

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displaying the respective image on a respective image display screen is an image displayed by using said image data obtained by said image data acquiring section (col. 25, lines 1-50 and col. 26, lines 1-50).

As to dependent claim 19, limitations of claim 10, and further comprising, wherein the image displayed on a respective image display medium for which a display mode is set in said step of setting an image display mode is an image displayed by using said image data (col. 25, lines 1-50 and col. 26, lines 1-50).

As to dependent claim 20, limitations of claim 10, and further comprising, steps of writing image data to an image display medium of the plurality of image display mediums and displaying an image by said image display medium, the displayed image corresponding to the written image data (col. 25, lines 1-50 and col. 26, lines 1-50).

As to dependent claim 21, limitations of claim 20, and further comprising, a step of erasing said image displayed by said image display medium (col. 25, lines 1-50 and col. 26, lines 1-50).

As to dependent claim 22, limitations of claim 1, and further comprising, wherein said plurality of substantially sheet-like image display mediums comprise a plurality of electronic papers. Ho does not disclose plurality of substantially sheet-like image display mediums comprise a plurality of electronic papers. Howard et al disclose electronic sheet display, which can be used with liquid crystal technologies (col. 1, lines 6-10. Further, Howard et al disclose where the electric, gyricon sheet has many characteristics such as being thin and flexible, and where multiple electronic paper sheets can be addressed by a single set of external driving electronics. Although, Howard et al do not explicitly state that the sheets may be bundled, it

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would have been obvious to one of ordinary skill in the art that the electronic sheet display of Howard et al can be bundled as stated in col. 1, lines 27-30. It would have been obvious to one of ordinary skill in the art to incorporate the electric sheets of Howard et al into that of Ho as Howard et al disclose in col. 1, lines 6-10 where the electric sheet display may be used with liquid crystal technologies.

As to dependent claims 23 and 31, limitations of claims 20 and 22, and further comprising, wherein each electronic paper comprises; a plurality of spheres, each sphere having one half of a first color and a second half of a second color, said first and second color being different; and two sheets having a gap there between in which the spheres are provided, wherein when an electric field is applied to the spheres, the spheres are rotated and fixed. Ho does not disclose wherein each electronic paper comprises; a plurality of spheres, each sphere having one half of a first color and a second half of a second color, said first and second color being different; and two sheets having a gap there between in which the spheres are provided, wherein when an electric field is applied to the spheres, the spheres are rotated and fixed. Howard et al disclose where the electronic paper comprises a plurality of spheres, each sphere having one half of a first color and a second half of a second color, said first and second color being different; and two sheets having a gap there between in which the spheres are provided, wherein when an electric field is applied to the spheres, the spheres are rotated and fixed in col. 10, lines 8-35.

It would have been obvious to one of ordinary skill in the art to incorporate the electric sheets of Howard et al into that of Ho as Howard et al disclose in col. 1, lines 6-10 where the electric sheet display may be used with liquid crystal technologies.

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As to dependent claims 24 and 25, limitations of claims 22 and 23, and further comprising, wherein said plurality of electronic papers are sequentially connected in an accordion folded form. Ho and Howard et al do not disclose the accordion folded form of connection. It would have been obvious to one of ordinary skill in the art to incorporate any means required to attach the electronic papers as is well known in the art.

As to dependent claim 26, limitations of claim 22, and further comprising, wherein each electronic paper comprises a sheet shaped liquid crystal film. Ho does not disclose where the electronic paper comprises a sheet shaped liquid crystal film. Howard et al disclose where the electric, gyricon sheet has many characteristics such as being thin and flexible, and where multiple electronic paper sheets can be addressed by a single set of external driving electronics. Although, Howard et al do not explicitly state that the sheets may be bundled, it would have been obvious to one of ordinary skill in the art that the electronic sheet display of Howard et al can be bundled as stated in col. 1, lines 27-30. It would have been obvious to one of ordinary skill in the art to incorporate the electric sheets of Howard et al into that of Ho as Howard et al disclose in col. 1, lines 6-10 where the electric sheet display may be used with liquid crystal technologies.

As to dependent claims 27 and 28, limitations of claim 26, and further comprising, wherein each electronic paper is a reflection type display or a transmission type display. Ho does not disclose where the electronic paper is a reflection type display or a transmission type display. Howard et al disclose wherein each electronic paper is a reflection type display or a transmission type display in col. 1, lines 6-10. It would have been obvious to one of ordinary skill in the art to incorporate the electric sheets of Howard et al into that of Ho as Howard et al

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disclose in col. 1, lines 6-10 where the electric sheet display may be used with liquid crystal technologies.

As to dependent claims 29 and 30, see limitations of claims 1 and 10, above.

Response to Arguments

3. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 703 306 5575.

The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, xxxx xxxx can be reached on xxx xxx xxxx. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AMR A. AWAD
PRIMARY EXAMINER

Srilakshmi K. Kumar
Examiner
Art Unit 2675